**BRAZIL – Fiscal Policy**

**Match Point**

- Throughout 2015, the government took efforts to reverse the fiscal trend; nonetheless, the structural primary deficit widened again in 2016, likely, due to expenditure acceleration.
- Moreover, according to our 2016 and 2017 forecasts, the primary result (using IMF methodology to adjusted for cycles) will remain in negative territory, indicating that regardless of potential short-term improvement (as forecast by consensus) in the fiscal trend, the central government will still run a stimulative fiscal policy.
- The coefficient of the structural primary balance is negative and significant for both service and market inflation, indicating that, ceteris paribus, each 1% in structural primary above the neutral level could reduce service inflation deviation from the target inflation and market inflation deviation from the target inflation by ~0.5 percentage points.
- However, we believe that the match point for service and market inflation will be served by the fiscal policy in the long term given the option of a slow fiscal policy adjustment, in our opinion. We foresee the structural primary running above at 1% above neutral level from 2018 onwards.

**Introduction**

We believe that the government’s strategy is to tighten the fiscal policy despite its downward revision of the primary balance this year to a deficit of 2.75% of GDP, which maintains the structural primary result (adjusted for the economic cycle) on the lax side. If indeed there is fiscal tightening from 2017 onward — and we expect as such — then, in our opinion, this tightening will be crucial to the disinflationary process in the upcoming years. Nevertheless, we believe that the improvement in the primary result will not be sufficient to stabilize the public debt ratio to GDP throughout this period.

In this piece, we present our estimate for structural primary result (using IMF methodology) and the potential impact of the fiscal scenario on inflation, in particular with respect to service and market price inflation. In our opinion, following this first round in disinflationary process triggered by the plunge in regulated price inflation, we could have another round of the disinflationary process to be triggered by a tightening fiscal stance.

**Structural primary result**

The main reason to measure the structural primary result is to obtain a more accurate assessment of the fiscal stance. Hence, we choose the approach of discounting (1) one-off (non-recurring fiscal operations) revenue and expenditures; (2) factors not correlated with the business cycle; and (3) the effect of the output gap in the primary result. In this sense, the structural primary balance is an improvement in looking at the cyclically adjusted primary balance with respect to interpreting the fiscal result.

In the Brazilian case, we do not see relevant factors not correlated with the business cycle to be discounted from revenues and/or expenditures. For instance, we did not consider the commodity super-cycle of 2003-08 (prior to the international credit crunch) as a factor not correlated with the business cycle because Brazil economy is driven by domestic consumption, the importance of tax charged on export goods is low for the total revenue,. There are, of course, exception to this rule: some

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Footnote:
regional governments in Brazil (Rio de Janeiro, Espírito Santo, Minas Gerais, Pernambuco, and Bahia, for example) collected taxes from the mining sector (i.e., commodities) represent a significant share of total revenue. However, because the regional government’s contribution to the total public sector primary result is minuscule compared to the contribution of the central government (e.g., the National Treasury, BCB and the General Regime of Social Security — RGPS) at about a 10/90 ratio, we discounted the one-off impact and the business cycle effect on revenue and expenditures in order to assess the actual fiscal stance.

In this exercise, we used the official estimate of the central government’s primary balance as calculated by the National Treasury monthly since January 1997 and constructed from data on federal revenue (taxes and other revenue) and expenditures, allowing for a more detailed view of fiscal accounts. However, these data series do not generally coincide with the monthly figures estimated by the Central Bank following the Public Sector Borrowing Requirements (PSBR) methodology, which is the metric for fiscal targets. We do this because, in our opinion, the average discrepancy between the two surveys has been about R$ 200 million/year on average since 2000, which is sufficiently small to be disregarded. Moreover, contrary to PSBR methodology, the National Treasury also discloses its revenue, distinguishing between tax and non-tax revenue, and its expenditures, distinguishing between mandatory and non-mandatory.

Regarding one-off discounts, on the revenue side, we discounted one-off dividends and concession payments, the amount of the sale of oil rights (Petrobras pre-salt production) in September 2010, and the tax amnesty program (REFIS) in November-December 2013. On the expenditure side, we discounted the amount deposited in the Brazilian Sovereign (BS) Fund in December 2008, the capitalization of Petrobras in September 2010, and the payment of fiscal maneuvers throughout 2015. Thus, we ended up with the official primary balance figure deducted from these accounts, in order to obtain the actual fiscal effort, chiefly in terms of the impacts on domestic demand (see chart below).

**Central Government Primary Balance (% of GDP)**

![Central Government Primary Balance Chart](image)

Sources: National Treasury and Santander estimates.

The difference between the series, which had been, on average, high between 1998 and 2002 (around 1.1% of GDP), declined significantly between 2003 and 2008 (to 0.6% of GDP), but shot up from 2010 onward reaching 1.2% of GDP. In 2014, the central government primary adjusted by one-off factors reached a deficit of 0.99% of GDP, instead the official effective primary balance was a deficit of 0.3% of GDP.

With the same purpose, after the deduction of the one-off factors, we deducted the impact of the output gap in revenue and expenditures. In this way, we decompose the primary balance into two parts: (a) the fiscal response to changes in economic activity (the cyclical component); and (b) the fiscal result independent of the economic cycle (the structural balance).

**Aggregated vs. Disaggregated Approach**

The aggregated approach computes the cyclically adjusted balance as a function of cyclically adjusted overall revenue (R*) and cyclically adjusted expenditures (G*). The cyclical adjusted revenue is obtained by adjusting revenue for the effect of the deviation of potential from the effective GDP growth (output gap), with the revenue elasticity defining the strength of the cyclical effect. For this purpose, we estimate a regression of the following equations:

\[
\log R = \alpha + \beta * \log(\frac{Y}{Y_e})
\]

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\[ \log G = \alpha_G + \beta_G \log (Y/Y_e) \]

In this approach, we ran a Generalized Method of Moments (GMM) model to measure the pass-through coefficient, controlling for endogeneity problems. In the equations above, we state (1) federal revenue \((R)\); (2) real GDP growth \((Y)\); (3) potential GDP growth \((Y_e)\), and (4) federal expenditures \((G)\). And then, \(\beta\) is the revenue elasticity to GDP, and \(\beta_G\) is the expenditure elasticity to GDP.

According to our model, the revenue elasticity to GDP growth is 1.44, which is in-line with the economic theory, and means that each percentage increase in the output gap generate a percentage change in revenue larger than 1. Regarding the cyclical adjusted expenditure, the expenditure elasticity to GDP is 0, which is also in-line with the economic theory. In general, expenditure is discretionary, with part of it being independent from the economic cycle (such as, health, education and security spending) and part of it being opposite to the economic cycle (such as, social assistance spending, which increases during economic slowdown/contraction, and decreases during economic heating).

**Structural Primary Balance (Aggregated Approach)**

**Structural Balance and Cyclical Component (% of GDP)**

According to our estimate, the structural primary balance shows that the fiscal trend change took place in the aftermath of 2008’s financial crisis. Up to 2008, the official primary result and structural run parallel to 2% of GDP, signaling an intention to maintain a fiscal tight stance. After that, the structural primary shifted down and was held close to zero up until December 2013, despite official primary surpluses registered in this period. And, again in 2014, structural primary was shifted down to deficit side, and so the official primary result, without the help from international scenario and less nonrecurring revenue. **Throughout 2015, the fiscal effort to reverse the fiscal trend is clear; however, the structural primary deficit widened again in 2016, due to expenditure acceleration.**

The disaggregated approach computes the cyclical adjustment of individual revenue and expenditure categories. In our exercise, we adjusted revenue to the economic cycle and maintained expenditures with cyclical adjustments, because in Brazil almost 60% of spending is toward payroll and around 20% goes to current spending and social program spending, all largely independent of the business cycle, therefore not requiring adjustment. Tax collection, social security contribution, and indirect taxes were adjusted for the economic cycle. According to our estimate, tax collection elasticity to GDP is 1.9; social security contribution elasticity is 2.7 and indirect taxes elasticity is 1. Our estimate for elasticity coefficients were in-line with the coefficients estimate by Girouard and André (2005) for OECD countries, except social security contribution elasticity, which is higher (more than the double). A reasonable explanation is that during 2003-14 the share of formal jobs surpassed 60% of the total labor market, leading social security contribution growth to run far above GDP growth. According to this approach, **also we observed the primary deficit reversing throughout 2015, and widening again in 2016, due expenditure acceleration.**

To sum, on the primary result, we still see it in the red through April 2016, no matter which methodology we choose. The effective primary result points to a deficit of 2.32% of GDP, while the adjusted primary result points to a deficit of 1.94% of GDP; the structural primary aggregated adjusted points to a deficit of 1.13% of GDP, and the structural primary disaggregated adjusted points to a deficit of 0.73% of GDP. The data series range used to estimate the elasticities in both approaches is from January 2003 to December 2015 (on a monthly basis).
Structural Primary Balance (Aggregated vs. Disaggregated Approach) (% of GDP)

Sources: National Treasury and Santander estimate.

And, including our forecasts for the primary balance, nonrecurring revenue, payment of fiscal maneuvers and GDP growth trajectories this year and 2017, the primary result adjusted for cycles (using IMF methodology) will remain in negative territory, indicating that, regardless of the short-term improvement forecast by consensus regarding the fiscal trend, the central government will still run a stimulative fiscal policy.

Based on our forecast for the primary result, we expect a primary surplus of 0.1% of GDP, which would be supported significantly by non-recurring revenue of 1% of GDP. With this, we forecast that the structural primary balance will become neutral rather than tightened at year-end 2017.

Primary Balance Factors Breakdown (% of GDP)

<table>
<thead>
<tr>
<th>2015 Primary Surplus</th>
<th>(1.9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non Recurring revenues and expenditures</td>
<td>1.6</td>
</tr>
<tr>
<td>Impact of the Economic Cycle</td>
<td>(1.9)</td>
</tr>
<tr>
<td>Spending Growth</td>
<td>(0.8)</td>
</tr>
<tr>
<td>2015 Fiscal Package (remnant Effect)</td>
<td>0.5</td>
</tr>
<tr>
<td>New Fiscal Package</td>
<td>0.2</td>
</tr>
<tr>
<td>2016 Primary Surplus</td>
<td>(2.3)</td>
</tr>
<tr>
<td>Non Recurring revenues</td>
<td>1.1</td>
</tr>
<tr>
<td>Impact of the Economic Cycle</td>
<td>0.6</td>
</tr>
<tr>
<td>Spending Growth (structural reform)</td>
<td>0.4</td>
</tr>
<tr>
<td>New Fiscal Package</td>
<td>0.3</td>
</tr>
<tr>
<td>2017 Primary Surplus</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Sources: National Treasury and Santander estimates.

The cyclical component (impact of economic cycle) will have a positive contribution of 0.6 p.p. in 2017, according to our estimate and given our expectation of GDP growth at 2% (which is slight above our expectation of the current potential GDP growth). In the following three years, based on our forecast for GDP growth around 3%, we obtain an economic cycle contribution of around 0.8 p.p. per year to the primary balance that implies in a structural primary of 1% of GDP above the neutral level, taking into account our forecast for primary surplus at 2% of GDP. And, because of this we foresee the fiscal policy serving as a factor of inflation deceleration only from 2018 onward.

The match point for service inflation

For the exercise that measures the potential impact of the fiscal stance on inflation (service inflation), we choose to use the structural primary data series obtained by the aggregated approach, as it is a parsimonious approach and easier to forecast.

In a simple historical comparison, both service inflation compared to structural primary result (fiscal policy) and service inflation deviation from the target are negatively correlated. The same is observed comparing the market inflation (deviation from the target) to the structural primary result. Based on this, we ran a Generalized Method of Moments (GMM) model to measure the impact of the structural primary balance on service inflation and to minimize endogeneity problems. We used the service-inflation deviation from the target, the structural primary balance (aggregated approach), controlling for real interest rate
(ex ante), output gap and BRL variation. Also we run the same equation for market inflation. The coefficient of structural primary balance is negative and significant for both service and market inflation, indicating that, ceteris paribus, each 1% of structural primary surplus (i.e. above neutrality) could reduce service inflation deviation from the target and market inflation deviation from the target by of around 0.5 percentage points. In 12 months accumulated up to May, the service inflation deviation from the target was around 3 p.p., and the market inflation deviation from the target was around 4 p.p., while the structural primary was a deficit of 1.1% of GDP. All this math shows the distance that the fiscal policy would have to go in order to start helping the inflation trajectory.

Service inflation and Fiscal policy Tradeoff

Market inflation and Fiscal policy Tradeoff

Sources: National Treasury and IBGE.

That said, we believe the match point for service and market inflation could be served by the fiscal policy. Given that, we note the current environment of recession, a tight monetary stance, BRL appreciation, and service inflation having slightly dropped (to 7.5% from 8%, or in terms of service inflation deviation from the target, to 2.9 p.p. from 3.4 p.p.), while market inflation remains unchanged at ~8% (or in terms of market inflation deviation around 4 p.p.) between December and last May. However, the bad news is that the fiscal policy helping inflation fall might happen in the long term, due to the option of a slow fiscal policy adjustment.

Even assuming a better primary result in 2017, it will remain continue far from the primary surplus required to stabilize the public debt ratio to GDP, which we estimate at 2-3% of GDP, depending on the real GDP growth level and interest rate in the steady-state assumption (for further details, see our report, The Fiscal Maze III: Insurgent, published on October 28, 2015). And, it will not be sufficiently tightened to help curb service/market inflation to the target. In the short term, the economic recession and recent BRL appreciation remain as the only drivers that can be counted on to help lower inflation, in our view.
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